ABSTRACT

The present invention relates to a method for the detection of gene expression and analysis of both known and unknown genes. The invention is a highly sensitive, rapid and cost-effective means of monitoring gene expression, as well as for the analysis and quantitation of changes in gene expression for a defined set of genes and in response to a wide variety of events. ." It is an important feature of the present invention that no single molecular species of cDNA gives rise to more than one fragment in the collection of products which are subsequently amplified and representative of each expressed gene. This achievement is facilitated by immobilizing the cDNA prior to digesting and then digesting with sequentially with two frequently cutting enzymes. Linker oligomers are ligated to each cut site following the respective digestion. Primers, complementary to the oligomer sequence with an additional 3' variable sequence are used to amplify the fragments. Using an array of fragments theoretically facilitates the amplification of all of the possible messages in a given sample.